

## ABSTRACT

One embodiment of the present invention provides a method for rendering a three-dimensional 3D graphical image. The method comprises representing the 3D graphical image as a plurality of graphics primitives, each having a plurality of vertices. For each of said plurality of graphics primitives, at least two texture coordinate gradient vectors are computed. Additionally, for each vertex of the plurality of graphics primitives, the method comprises determining a 3D coordinate frame, wherein such determining step includes using the at least two texture coordinate gradient vectors computed for the respective graphics primitive for orienting the 3D coordinate frame. Thereafter, the method comprises utilizing at least the 3D coordinate frame to determine parameters of a parametric texture mapping function.

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